

# **WISHA REGIONAL DIRECTIVE**

WISHA Services

Department of Labor and Industries

## **33.27 Cholinesterase Depression**

**Date: April 15, 2005**

### **I. Background**

The Department of Labor and Industries adopted Chapter 296-307-148 WAC, Cholinesterase Monitoring, in October 2003. The cholinesterase monitoring rule requires agricultural employers to document hours employees spend handling toxicity category I or II organophosphate or N-methyl-carbamate cholinesterase-inhibiting pesticides. Employees who meet a specified handling hour threshold must be provided with the opportunity to participate in a medical monitoring program.

WISHA is required to evaluate the cholinesterase monitoring rule by organizing a scientific team and a stakeholder advisory committee. The collection of information related to the use of covered pesticides, for cases showing a depression from the baseline level, is required for an effective evaluation of the depression and the effectiveness of the rule. To facilitate the collection of information and to assist employers with their employee safety and health efforts, research investigations will be offered to employers in response to employee cholinesterase depression to the pesticide-handling removal level. Other cases showing a cholinesterase depression will be investigated as research resources permit. WISHA will use enforcement and consultation resources as necessary and appropriate to collect information related to cholinesterase depressions.

All blood samples collected under the cholinesterase monitoring rule are currently analyzed by the Public Health Laboratory (PHL) of the Department of Health (DOH). WISHA is notified by DOH of each test indicating a cholinesterase level depressed by more than 20% from the employee's individual baseline. This information will be used to initiate research investigations of the work environments of employees with reported depressions.

A temporary position to conduct research investigations of cholinesterase depressions has been established in Region 5. This position will be the "lead investigator" responsible for ensuring research investigations of cholinesterase depression are completed in a manner that is both timely and consistent with this policy.

### **II. Scope and Application**

This WISHA Regional Directive (WRD) provides guidance to WISHA research, consultation and enforcement staff regarding data collection for a reported cholinesterase depression as defined by the cholinesterase monitoring rule for agriculture (Chapter 296-307-148 WAC). This WRD replaces the WRD 33.27, issued July 12, 2004, which itself replaced the original WRD 33.27, issued April 19, 2004.

*-- policy continues on reverse of page --*

### **III. WISHA Research Investigation Protocols**

#### *A. How will regional staff be notified of cholinesterase depressions?*

WISHA Policy and Technical Services (P&TS) will send a protected e-mail to the lead investigator, the Region 5 Compliance Manager (who is supervising the lead investigator), and appropriate consultation and compliance supervisors. The e-mail will identify the employer and work location, contact information, employee name, and level of depression.

WISHA P&TS will confirm that the health care provider has received the notice of employee cholinesterase depression and plans appropriate employer notification prior to contacting regional staff.

#### *B. Will investigations be prioritized?*

Yes, cholinesterase depressions to the pesticide-handling removal level will take priority. For these cases, the goal is to make initial contact with the employer within two work days of notification by WISHA P&TS and to be on-site within three days of initial contact. The investigator may coordinate with grower organizations to assist with scheduling the on-site visit. If the employer is unwilling to schedule the investigation within one week of notification from WISHA P&TS, the lead investigator will refer the case to the appropriate industrial hygiene or safety enforcement supervisor.

Investigation of cholinesterase depressions to the work evaluation level will be scheduled as permitted by the investigation workload, but the goal is to make initial contact with the employer within one week of notification by WISHA P&TS. The investigator should be on-site within two weeks of initial contact with the employer to investigate this type of depression. If the employer is unwilling to schedule the investigation within three weeks of notification from WISHA P&TS, the lead investigator will refer the case to the appropriate industrial hygiene or safety compliance supervisor.

#### *C. How will a research investigation be scheduled?*

The lead investigator will either:

- Initiate contact (usually by telephone) with the employer and schedule the investigation.

OR

- When required by workload,
  - o Contact the appropriate supervisor to assign the investigation to other bilingual Region 5 WISHA staff that will initiate contact and schedule the investigation.

OR

- o For an employer outside Region 5, coordinate with the Region 5 Compliance Manager for assignment of the investigation to WISHA P&TS or to WISHA staff in the other region.

- The assigned investigator will provide the lead investigator weekly updates on the status of the investigation.

The investigator will contact the employer and schedule the investigation to meet the time criteria specified in item B.

*D. What is the purpose or scope of the research investigation?*

Generally, the investigation will evaluate an employer's performance under the pesticide worker protection standard and cholinesterase monitoring rules. More specifically, the investigation will seek to identify specific factors that could have contributed to the employee's overexposure. This will involve an evaluation of the equipment (including PPE) and facilities provided by the employer, and the employee's knowledge and ability regarding use of the facilities and equipment. Each employee with a depression should be contacted and any that agree to an interview should be interviewed in private.

The Helpful Tool contained in WAC 296-307-148, "Worker Protection Standard Checklist of Requirements" and Attachment A to this WRD "Cholinesterase Monitoring Follow-Up Form," will be used to focus the collection of information. This will assist the department in conducting an analysis of the cholinesterase-monitoring rule by collecting consistent information for each depression investigated. Copies of the completed forms will be submitted to the Occupational Nurse Consultant in WISHA P&TS, mail stop: 4610.

P&TS will maintain an aggregate electronic database of information collected during research investigations.

*E. How will the investigator report findings to the employer?*

- a. The investigator will prepare a report of findings for the employer. The report will be prepared from Word templates supplied by WISHA P&TS and will include at least the following, when applicable:
  - A cover letter
  - An introduction
  - Rule violations identified
  - Other findings
  - Recommendations
  - Hazard correction certification

The cover letter will explain to the employer their responsibilities from this investigation.

- b. The employer will be informed of the need to correct serious violations within 30 days and to notify the investigator of the corrective actions taken. The lead investigator may approve a shorter or longer abatement period based on the circumstances of a particular investigation.

F. *Will investigators make referrals directly to enforcement staff?*

No, the investigator will notify the lead investigator of any problems encountered, and the lead investigator will determine how to resolve the issue with the employer or will make a referral to WISHA enforcement staff.

G. *Will investigators make other referrals?*

Yes, referrals will be made as follows:

- To Employment Standards for violations such as docking pay for PPE and for underage workers.
- To WSDA for pesticide application record keeping.
- To the DOH Pesticide Program Manager for symptoms related to pesticides, reported by an employee.

IV. **WISHA Enforcement Protocols**

The following protocols will be followed in addition to the normal practice of initiating inspections in response to complaints, multiple hospitalizations or fatalities.

A. *Will a complaint or programmed inspection of an employer with an employee cholinesterase depression be performed?*

Yes, these inspections will continue to be performed. However, such inspections need to be coordinated with the lead investigator, and the lead investigator needs to be informed of currently open inspections with these employers. The lead investigator will ensure that the information collection requirements of the research protocols are met when such an inspection is performed.

Compliance supervisors will be notified of employers with an employee cholinesterase depression to assist in the identification of these employers and coordination of efforts with the research investigation.

B. *When will enforcement inspections be conducted as a result of a reported cholinesterase depression?*

The lead investigator may refer a case of cholinesterase depression to field enforcement staff when either:

- A timely research investigation cannot be scheduled with the employer.
- A complaint alleging safety and health hazards related to pesticide usage is received for the employer.
- The employer does not correct a serious violation identified during the research investigation.

OR

- The employer has cases of multiple or repeated depressions.

The focus of the inspection will be the employer's cholinesterase monitoring program and their compliance with the worker protection standard.

In addition to routine inspection information collection, the Helpful Tool contained in WAC 296-307-148, “Worker Protection Standard Checklist of Requirements” and the “Cholinesterase Monitoring Follow-Up Form,” Attachment A to this WRD will be used to focus the collection of information for each employee with a cholinesterase depression. This will assist the department in conducting an analysis of the cholinesterase monitoring rule by collecting consistent information for each depression investigated.

Copies of the completed forms will be submitted to the Occupational Nurse Consultant in WISHA P&TS, mail stop: 4610.

*C. Will inspections be performed to verify employer correction of serious violations?*

Inspections may be performed on a randomly selected group of employers as part of inspection targeting for cholinesterase. Employers that are not participating in the medical surveillance program would also be included in the targeting for cholinesterase.

The lead investigator may also refer individual cases to compliance for verification.

*D. Will enforcement staff receive other referrals for cholinesterase depressions?*

Referrals from other agencies, such as WSDA or DOH, are not anticipated for cholinesterase depressions; however, these agencies are expected to continue making referrals for other pesticide-related issues. Worker complaints may also be received and inspections should be scheduled following existing WISHA guidelines.

**V. WISHA Consultation Protocols**

*A. How will a request for consultation received from an employer with an employee cholinesterase depression be handled?*

A consultation request from an employer that has an employee with a depressed cholinesterase level will not be accepted until the investigation has been completed or the lead investigator requests that consultation perform the investigation.

If a consultation is already in progress, for an employer with an employee cholinesterase depression, consultation will coordinate with the lead investigator. The lead investigator will ensure that the information collection requirements of the research protocols are met.

*B. What will the focus of the requested consultation be?*

When the lead investigator requests the assistance of consultation to investigate a cholinesterase depression, the consultation will have the same focus as a research investigation outlined in section III.D. of this policy. This will assist the department in conducting an analysis of the cholinesterase monitoring rule by collecting consistent information for each depression investigated.

Copies of the completed forms will be submitted to the Occupational Nurse Consultant in WISHA P&TS, mail stop: 4610.

**VI. Policy and Technical Services Protocols****A. *How will WISHA P&TS assist with the investigation of cholinesterase depressions?***

WISHA P&TS will do the following:

- Notify the medical provider within one business day of receiving the alert of a depressed cholinesterase level from DOH.
- Notify regional staff of cholinesterase depressions within five business days of receiving the alert from DOH. Notification will be sent to the cholinesterase lead investigator, appropriate consultation and compliance supervisors, and the Region 5 Compliance Manager.
- Enter data collected on the Worker Protection Standard (WPS) checklist and Attachment A to this WRD into a database to facilitate comparisons of data. The database will be regularly shared with regional staff performing investigations for review.
- Provide technical resources for cholinesterase to the regions on request.
- Provide bilingual staff to assist with investigations of cholinesterase depressions.
- Provide other staff services as needed for the investigation of cholinesterase depressions.
- Provide clinical consultation services and act as a liaison to the medical provider when necessary.

Approved: \_\_\_\_\_  
Michael Wood, Acting Assistant Director  
WISHA Service Division

For further information about this or other WISHA Regional Directives, you may contact WISHA Policy & Technical Services at P.O. Box 44648, Olympia, WA 98504-4648 or by telephone at (360) 902-5503. You also may review policy information on the WISHA Website (<http://www.lni.wa.gov/Safety/>)

# Attachment A - Cholinesterase Monitoring Follow-up Form

## EMPLOYER QUESTIONS

Complete this form if employer has employee(s) who have had a cholinesterase depression(s) to the removal level or employees with depressions of 20% or greater.

Review the following, obtain copies of or include information from, as necessary:

*Pesticide handling hour records*

*Pesticide label(s)*

*Medical removal records*

*Respirator Program*

*Photos*

*Written recommendations and opinions received from the physician or licensed health care provider*

*Employer work practice investigations and corrective actions*

Employer name	Address/Telephone	
Crop Type(s)		Number of acres
List any OP/CARB pesticides and formulation already applied by this <b>employer</b> this year:		
List all employees with any OP/CARB pesticides handling this year:		
<b>Yes    No</b> <input type="checkbox"/> <input type="checkbox"/> Were handling hours recorded for all these employees? <input type="checkbox"/> <input type="checkbox"/> Were all eligible employees offered ChE monitoring?		

### Personal Protective Equipment

<b>Gloves:</b> Where do your employees get gloves? When do they need new gloves? How would they get new ones? Who pays for them?	
<b>Skin protection</b> (e.g. raingear, tyvek, saranex, coveralls): Where did your employees get their gear? When would they need new gear? How would they get new gear? Who pays for it?	
<b>Respirator:</b> Where do your employees get a respirator? When do they need a new respirator? How would they get a new one? Who pays for them? What is your policy regarding respirators and facial hair? How is it enforced?	<b>Respirator Cartridges:</b> Where do they get respirator cartridges? When do they need new cartridges? How would they get them? Who pays for them?

# Attachment A - Cholinesterase Monitoring Follow-up Form

## EMPLOYER QUESTIONS – EMPLOYEE SPECIFIC

Employer		Employee Name		Birth Date:	
WSDA certified applicator training) <input type="checkbox"/> Yes <input type="checkbox"/> No (if no, describe			Time employed as pesticide handler:		
List all toxicity class I and II organophosphate and N-methyl-carbamate pesticides handled by this employee <b>in the last 30 days (include formulations and any adjuvants)</b> . Attach copies of spray records and/or dates, hours, and quantities, if available.					
List all toxicity class I and II organophosphate and N-methyl-carbamate pesticides handled by this employee <b>during this year (include formulations and any adjuvants)</b> . Attach copies of spray records and/or dates, hours, and quantities, if available.					
Respirator fit test: <input type="checkbox"/> Yes <input type="checkbox"/> No Fit test date: Fit test performed by:			Describe how the fit test was performed:		
<b>Type of respirator fit-tested on:</b> <input type="checkbox"/> 1/2 Face <input type="checkbox"/> Full Face <input type="checkbox"/> PAPR <input type="checkbox"/> Cabot <input type="checkbox"/> AO Safety <input type="checkbox"/> Moldex <input type="checkbox"/> Bullard <input type="checkbox"/> Surviveair <input type="checkbox"/> North <input type="checkbox"/> Other:			<b>Method of fit-test:</b> <input type="checkbox"/> Banana Oil <input type="checkbox"/> Banana Oil ampules <input type="checkbox"/> Irritant Smoke <input type="checkbox"/> Bitrex <input type="checkbox"/> Quantitative <input type="checkbox"/> Saccharine		
<b>Yes No Education and notification of cholinesterase test results (include comments on services):</b> <input type="checkbox"/> <input type="checkbox"/> Trained per WAC 296-307-14840? Materials used for training:  <input type="checkbox"/> <input type="checkbox"/> Did medical provider discuss the risks and benefits of cholinesterase monitoring? What did the employee understand?  <input type="checkbox"/> <input type="checkbox"/> Was the training in a language the employee could understand? <input type="checkbox"/> <input type="checkbox"/> Did the medical provider notify the employer of cholinesterase test results & interpretations? Date: _____ <input type="checkbox"/> <input type="checkbox"/> Was the employee notified of cholinesterase test results and interpretations? Date: _____					
<b>If the employee had a cholinesterase depression:</b> Employer notified by medical professional on (date): _____ How did you respond to the employee's depression (date, time, location)? Was an evaluation done? By whom? What were the findings? How were any identified deficiencies corrected?					



## Attachment A - Cholinesterase Monitoring Follow-up Form

### EMPLOYER QUESTIONS – EMPLOYEE SPECIFIC

Employer	Employee Name
<b>If the employee had an exposure removal depression:</b>	
<input type="checkbox"/> Employee removed from OP/CARB handling on (date): _____ Date removal ended: _____ (Explain if not removed)	
<input type="checkbox"/> Handling hours and duties for OP/CARB after the blood test but before removal:	
<input type="checkbox"/> Employee's pay and benefits maintained? ( Y or N ) If "No", please explain.	
<input type="checkbox"/> Employee removed from all work? (Y or N)	
<input type="checkbox"/> Other duties employee assigned to (describe):	
<input type="checkbox"/> Date of follow-up blood test (if available): _____	
<input type="checkbox"/> Date returned to OP/CARB handling activities (if returned): _____	
<b>Describe potential exposures for this employee:</b>	
<input type="checkbox"/> Mixing/loading	<input type="checkbox"/> Application / Handling
<input type="checkbox"/> Equipment maintenance	<input type="checkbox"/> Air-blast spraying
<input type="checkbox"/> Early reentry	<input type="checkbox"/> Equipment used for other activities w/o decontamination. (e.g. tractor used w/o cleaning)
<b>Other</b> (specifics):	

Additional comments or notes:

\_\_\_\_\_  
This form completed by (Name, Title)

\_\_\_\_\_  
Date

SEND A COPY OF THIS FORM ALONG WITH THE "WORKER PROTECTION STANDARD CHECKLIST OF REQUIREMENTS" TO THE OCCUPATIONAL NURSE CONSULTANT IN WISHA POLICY & TECHNICAL SERVICES MAIL STOP 44610 FAX 360-902-5438

# Attachment A - Cholinesterase Monitoring Follow-up Form

## EMPLOYEE INTERVIEW FORM

We're here to follow up on the results of your blood test. Your cholinesterase levels are depressed. This means that your nervous system is affected by the carbamate or organophosphate pesticides that you are using. Because your cholinesterase levels will recover and come back up pretty quickly when you are not exposed to these pesticides, it is important that we try and identify any potential ways the pesticides could be getting on or into your body through your skin, your mouth, your eyes, or into your lungs. We are asking you to help us figure this out and we will be asking you some questions about processes and procedures used during pesticide handling.

Employer		Employee name	Date
<b>Describe potential exposures for this employee:</b> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Mixing/loading  <input type="checkbox"/> Equipment maintenance  <input type="checkbox"/> Early reentry  <input type="checkbox"/> Handling pesticides for another employer  <input type="checkbox"/> Personal use of pesticides  <input type="checkbox"/> Application / Handling  <input type="checkbox"/> Air-blast spraying  <input type="checkbox"/> Equipment used for other activities w/o decon.  (e.g. tractor used w/o cleaning) </div> <div style="width: 50%;"> <input type="checkbox"/> Smoke cigarettes /chew tobacco  <input type="checkbox"/> Cotton cap or bandana worn during work  <input type="checkbox"/> Use of empty pesticides containers )  <input type="checkbox"/> Cell phone, pens, notebooks, pocket items during handling  <input type="checkbox"/> Inadequate decontamination for bathroom breaks  <input type="checkbox"/> Inadequate decontamination for breaks/errands  <input type="checkbox"/> Inadequate decontamination before lunch  <input type="checkbox"/> Irrigating  <input type="checkbox"/> Drift exposure  <input type="checkbox"/> Residence on farm </div> </div> <p><b>Other</b> (specifics):</p>			
<b>Yes    No                      Education and notification of cholinesterase test results (include comments on services):</b> <input type="checkbox"/> <input type="checkbox"/> WPS training?    Materials used for training: <input type="checkbox"/> <input type="checkbox"/> Trained per WAC 296-307-14840?    Materials used for training: <input type="checkbox"/> <input type="checkbox"/> Did medical provider discuss the risks and benefits of cholinesterase monitoring? Was it understandable? <input type="checkbox"/> <input type="checkbox"/> Was the training in a language the employee could understand? <input type="checkbox"/> <input type="checkbox"/> Employee notified of cholinesterase test results and interpretations?			
<b>Respirator fit test:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Fit test Date:</b> <b>Fit test performed by:</b>		<b>Describe how the fit test was performed? Length of time the test took?</b>	
<b>Type of respirator fit-tested on:</b> <input type="checkbox"/> ½ Face <input type="checkbox"/> Full Face  <input type="checkbox"/> Cabot <input type="checkbox"/> AO Safety <input type="checkbox"/> Moldex <input type="checkbox"/> Bullard <input type="checkbox"/> Surviveair <input type="checkbox"/> North <input type="checkbox"/> Other:		<b>Method of fit-test:</b>  <input type="checkbox"/> Banana Oil <input type="checkbox"/> Banana Oil ampules <input type="checkbox"/> Irritant Smoke <input type="checkbox"/> Bitrex <input type="checkbox"/> Quantitative <input type="checkbox"/> Saccharine	
<input type="checkbox"/> Yes <input type="checkbox"/> No <b>Is the employee clean-shaven?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <b>Do they understand about respirators and beards?</b>			

# Attachment A - Cholinesterase Monitoring Follow-up Form

## EMPLOYEE INTERVIEW: PERSONAL PROTECTIVE EQUIPMENT

**Identify the personal protective equipment available.** Describe the employee's work clothing and how it is handled. Protective clothing type, material, change schedule, and manufacturer.

Employer	Employee name	Date
<b>Gloves</b> Where did you get your gloves? When would you need new gloves? How would you get new ones? Who pays for them? Do your gloves get cleaned? <input type="checkbox"/> Yes <input type="checkbox"/> No  When do your gloves get cleaned?  Where and how do your gloves get cleaned?		<b>Glove type(s):</b> Manufacturer: <input type="checkbox"/> Latex <input type="checkbox"/> Nitrile <input type="checkbox"/> Rubber-coated <input type="checkbox"/> Cotton <input type="checkbox"/> Rubber <input type="checkbox"/> Other: <b>Storage:</b>
<b>Skin protection (raingear, tyvek, saranex, coveralls)</b> Where did you get your gear? When would you need new gear? How would you get new gear? Who pays for it? Does your skin protection get cleaned? <input type="checkbox"/> Yes <input type="checkbox"/> No  When does your skin protection get cleaned?  Where does and how does your skin protection get cleaned?		<b>Type:</b> Manufacturer: <input type="checkbox"/> Coat <input type="checkbox"/> Pants <input type="checkbox"/> Hooded <input type="checkbox"/> Hood separate <b>Storage:</b>
<b>Foot wear:</b> <input type="checkbox"/> Shoes <input type="checkbox"/> Leather boots <input type="checkbox"/> Rubber boots <input type="checkbox"/> Other: Where did you get them?  Does your foot wear get cleaned? <input type="checkbox"/> Yes <input type="checkbox"/> No  How and when does it get cleaned?		
<b>Mixing station:</b> <input type="checkbox"/> Towels <input type="checkbox"/> Soap <input type="checkbox"/> Change of clothes <input type="checkbox"/> Eyewash <input type="checkbox"/> Eye flush (pint)		

## Attachment A - Cholinesterase Monitoring Follow-up Form

### EMPLOYEE INTERVIEW: PERSONAL PROTECTIVE EQUIPMENT (CONT.)

Employer	Employee name	Date								
<b>Respirator</b> Where did you get your respirator? When would you need a new respirator? How would you get a new one? Who pays for it? Does your respirator get cleaned? <input type="checkbox"/> Yes <input type="checkbox"/> No When does your respirator get cleaned?  Where and how does your respirator get cleaned?		<b>Respirator:</b> <input type="checkbox"/> ½ Face <input type="checkbox"/> Full Face <input type="checkbox"/> PAPR  <input type="checkbox"/> Cabot <input type="checkbox"/> AO Safety <input type="checkbox"/> Bullard <input type="checkbox"/> Moldex <input type="checkbox"/> Surviveair <input type="checkbox"/> North <input type="checkbox"/> Other: <b>Respirator Storage:</b>								
Please demonstrate putting on your respirator?		Please demonstrate a fit check.								
<b>Respirator Cartridges</b> Where did you get your respirator cartridges? When would you need new cartridges? How would you get them? Who pays for them?		<table style="width: 100%; border: none;"> <tr> <th style="text-align: left; padding: 5px;">Respirator</th> <th style="text-align: left; padding: 5px;">Cartridges</th> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> Organic Vapor</td> <td style="padding: 5px;"><input type="checkbox"/> N Pre-filter</td> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> P Pre-filter</td> <td style="padding: 5px;"><input type="checkbox"/> R Pre-filter</td> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> Other :</td> <td></td> </tr> </table>	Respirator	Cartridges	<input type="checkbox"/> Organic Vapor	<input type="checkbox"/> N Pre-filter	<input type="checkbox"/> P Pre-filter	<input type="checkbox"/> R Pre-filter	<input type="checkbox"/> Other :	
Respirator	Cartridges									
<input type="checkbox"/> Organic Vapor	<input type="checkbox"/> N Pre-filter									
<input type="checkbox"/> P Pre-filter	<input type="checkbox"/> R Pre-filter									
<input type="checkbox"/> Other :										
<b>Eye Protection:</b> <input type="checkbox"/> Goggles <input type="checkbox"/> Safety glasses <input type="checkbox"/> Face-shield <input type="checkbox"/> Full face respirator <input type="checkbox"/> Other:										
<b>What decontamination happens at the end of the work day? How is it done?</b> Available equipment, clothing, shower?           <div style="display: flex; justify-content: space-between;"> <span><b>Yes</b></span> <span><b>No</b></span> </div> <input type="checkbox"/> <input type="checkbox"/> Is this time paid? (If no, explain)										
<b>Please demonstrate putting on/taking off your PPE? Comments:</b>     										
<input type="checkbox"/> Yes <input type="checkbox"/> No <b>Have there been times you could not get the gear you needed? (If no, explain)</b>										

# Attachment A - Cholinesterase Monitoring Follow-up Form

## INTERVIEW: PESTICIDE EXPOSURE EVALUATION

Employee:

Employer:

Pesticide:

Formulation:

Label:

**Describe pesticide handling activities for the employee (be specific):** What handling activities do you perform with this pesticide and how? (e.g. Assisting applicator, flagging, cleaning, handling, disposing of open containers, equipment decontamination) What equipment do you use? How do you use it?

What do you wear while handling?

When and how do you put your gear on?

- ☐ Raingear      ☐ Gloves  
☐ Eye protection      ☐ Respirator  
☐ Shoes

When do you take it off and what do you do with it?

**Describe pesticide mixing and loading activities for this employee with this pesticide (be specific):** How do you mix and load the equipment? (e.g. solupak first, then water?)

What do you wear while mixing and loading?

When and how do you put your gear on?

- ☐ Raingear      ☐ Gloves  
☐ Eye protection      ☐ Respirator  
☐ Shoes

When do you take it off and what do you do with it?

**Describe application methods, activities and equipment for this employee with this pesticide (be specific):** How do you apply this pesticide? (e.g. closed system, backpack sprayer, airblast sprayer)

What do you wear while applying?

When and how do you put your gear on?

- ☐ Raingear      ☐ Gloves  
☐ Eye protection      ☐ Respirator  
☐ Shoes

When do you take it off and what do you do with it?

**What pesticides have you handled this season?**

☐ Yes ☐ No **Do your handling hours agree with your employer's? (If no, explain)**

## Attachment A - Cholinesterase Monitoring Follow-up Form

### INTERVIEW: PESTICIDE EXPOSURE EVALUATION

Employee:

Employer:

Pesticide:

Formulation:

Label:

**Describe equipment maintenance activities for this employee with this pesticide (explain any differences for specific pesticides):** How do you unclog the sprayer nozzles? How do you calibrate equipment? Do you maintain the tractor –if so how/when? Is it cleaned first?

What do you wear during equipment maintenance?

When and how do you put your gear on?

☐ Raingear:

☐ Gloves:

☐ Eye protection

☐ Respirator:

☐ Shoes:

When do you take it off and what do you do with it?

Describe what you do if you need a **bathroom break** while handling/applying pesticides (be specific):

Describe your activities before **errands/ breaks** while handling/applying pesticides (be specific):

Describe your activities before **eating or snacking** while handling/applying pesticides (be specific):

Describe what you do if you need a **smoke** while handling/applying pesticides (be specific):

\_\_\_\_\_  
This form completed by (Name, Title)

\_\_\_\_\_  
Date

SEND A COPY OF THIS FORM ALONG WITH THE “WORKER PROTECTION STANDARD CHECKLIST OF REQUIREMENTS” TO THE OCCUPATIONAL NURSE CONSULTANT IN WISHA POLICY & TECHNICAL SERVICES  
MAIL STOP 44610 FAX 360-902-5438

# Attachment A - Cholinesterase Monitoring Follow-up Form

## INTERVIEW: PESTICIDE EXPOSURE EVALUATION

<b>Employer</b>	<b>Employee name</b>	<b>Date</b>
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Have you experienced any health effect or symptoms that you think may be related to your pesticide handling activities during the past 6 weeks?

If yes, please describe:

Have you experienced any of the following during the past 6 weeks?

		Rarely			Often
Muscle twitch or weakness	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Shortness of breath	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Diarrhea	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Frequent urinating	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Headaches	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Dizziness/vertigo	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Nausea or queasiness	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Stomach pain	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Unexplained anxiety	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Pinpoint pupils	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Tunnel vision	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Excessive sweating	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Excessive tearing	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5
Drooling	<input type="checkbox"/> Yes <input type="checkbox"/> No	1	2	3	4 5

### Comments:

Referred to DOH Pesticide Program Manager ☐ Yes ☐ No Date: \_\_\_\_\_